Supporting Information

Efficient synthesis of functionalized dihydroquinolines, quinolines and dihydrobenzo[b]azepine via an iron(III) chloride-catalyzed intramolecular alkyne-carbonyl metathesis of alkyne tethered 2-amino benzaldehyde/acetoephene derivatives

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1H & 13C NMR spectra of compounds (2a-2j, 4a-4b, 3a-3j, 5a-5b, 6a-6c, 7a-7d, 8a-8d): p2–35

Crystal Structure of the compound 3b: p36
$^1$H NMR of compound 2a

$^{13}$C NMR of compound 2a
$^1$H NMR of compound 2b

$^{13}$C NMR of compound 2b
$^1\text{H NMR of compound 2c}$

$^{13}\text{C NMR of compound 2c}$
$^1$H NMR of compound 2d

$^{13}$C NMR of compound 2d
$^1$H NMR of compound 2e

$^{13}$C NMR of compound 2e
$^1$H NMR of compound 2f

$^{13}$C NMR of compound 2f
$^1$H NMR of compound 2g

$^{13}$C NMR of compound 2g
$^1$H NMR of compound 2h

$^{13}$C NMR of compound 2h
$^1$H NMR of compound 2i

$^{13}$C NMR of compound 2i
$^1$H NMR of compound 2j

$^{13}$C NMR of compound 2j
$^1$H NMR of compound 4a

$^{13}$C NMR of compound 4a
$^1$H NMR of compound 4b

$^{13}$C NMR of compound 4b

4b
**1H NMR of compound 3a**

![1H NMR of compound 3a](image)

**13C NMR of compound 3a**

![13C NMR of compound 3a](image)
$^1$H NMR of compound 3c

$^{13}$C NMR of compound 3c
$^1$H NMR of compound 3d

$^{13}$C NMR of compound 3d
$^1$H NMR of compound 3e

$^{13}$C NMR of compound 3e
$^1$H NMR of compound 3f

$^{13}$C NMR of compound 3f
$^1$H NMR of compound 3h

$^{13}$C NMR of compound 3h
$^1$H NMR of compound 3i

$^{13}$C NMR of compound 3i
$^1$H NMR of compound 5a

$^{13}$C NMR of compound 5a
$^1$H NMR of compound 5b

$^{13}$C NMR of compound 5b
$^1$H NMR of compound 6a

$^1$H NMR of compound 6b
$^1$H NMR of compound 6c

![NMR Spectrum of Compound 6c](image)
$^1$H NMR of compound 7b

$^{13}$C NMR of compound 7b
$^1$H NMR of compound 7c

$^{13}$C NMR of compound 7c
$^1$H NMR of compound 7d

$^{13}$C NMR of compound 7d
$^1$H NMR of compound 8a

$^{13}$C NMR of compound 8a
$^1$H NMR of compound 8b

$^{13}$C NMR of compound 8b
$^1$H NMR of compound $8c$

$^{13}$C NMR of compound $8c$
Crystal structure of 3b:

ORTEP representation of 3b

Crystallographic data have been deposited in the Cambridge Crystallographic Data Centre (CCDC number 961970).

Figure 1. Representations of 3b showing 40 % probability of thermal ellipsoid.